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ABSTRACT

This primer is designed to provide a step-by-step guide for state policymakers and state agency officials interested in assessing the literacy skills of the people of their state. Chapter 1 describes the importance of assessing the literacy skills in each state. Literacy is discussed as an economic necessity, a requirement for a healthy democracy, and a critical first step toward meeting the national literacy goal. Chapter 2 describes the five significant steps that have been taken since 1988 to improve knowledge about literacy and provides examples of successful literacy assessments. Chapter 3 provides a seven-step guide to designing and implementing a statewide literacy assessment. Chapter 4 explores three options for conducting state literacy assessments: participating in the National Adult Literacy Survey being conducted by the Educational Testing Service, conducting a separate statewide assessment, and developing proxy measures by using secondary data and national surveys. The costs and benefits of each approach are discussed as are the benefits of using multiple methods to refine each. Chapter 5 includes a discussion of how the results of a state literacy assessment fit into an overall literacy policy strategy that advances welfare reform, economic development, and education initiatives or other national or state policy goals. (Appendixes include a closer look at the steps that are necessary for conducting a literacy assessment, 6 endnotes, and a list of 19 works consulted.) (YLB)

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ASSESSING THE NATION'S LITERACY

A STATE POLICY PRIMER

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We would like to thank the conference presenters and participants for helping to focus our thinking and for providing both information and inspiration for this primer.

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INTRODUCTION

For at least five years the country has been struggling with the task of defining the nature of the literacy problem and understanding why it is important to our future. We have made significant progress. We have changed our way of thinking about literacy by introducing the concept of literacy as a continuum of skills. We have identified the importance of literacy to the workforce and drawn attention to the benefits of targeted programs. And we have a national goal of a literate workforce by the year 2000, endorsed by the President and the nation's governors.

The nation now has a goal of a literate workforce by the year 2000. Assessing the literacy skills of our people will be key to reaching this goal.

The national goal is ambitious, and may be unreachable. It reads:

> By the year 2000, every adult American will be literate and will possess the knowledge and skills necessary to compete in a global economy and exercise the rights and responsibilities of citizenship.

Literacy policymakers have a responsibility not only to try to achieve this goal, but also to measure progress toward achievement of this goal. To make better policy and design effective programs, we need to know much more about the current literacy status in the states. To measure progress, we need to design assessment systems that will tell us whether we are coming closer to this goal.

As we face the goal's daunting challenge, we know we have much to learn. We still don't know just how big the literacy problem is, and where it is the most severe. We still can't tell how many people in Alabama or California, for example, have or lack certain types of skills. We don't know how many people or which people need quantitative skills to function in entry-level jobs. We don't know how many people have basic literacy skills but lack the higher-order thinking skills needed in a growing number of jobs.

Despite significant advances in literacy assessment, we still don't know how big the problem is.

Despite our understanding of the need to target literacy programs to the skill levels and life circumstances of the learner, we still have not

done the work necessary to inform targeting decisions. Although we make choices about who to serve and how to serve them, most of these decisions are based on inadequate information or policy preconceptions. We are still basing policy on inferences from old national studies or studies done for a select age group.

At the national level a number of studies have been used to estimate the size of the literacy problem. Consideration has been given to using the 1985 Young Adult Literacy Survey, the Department of Labor's Assessment of Special Populations Literacy Skills, and the Armed Forces Qualification Test results to define the problem more accurately. Yet none of these surveys gives a full picture of the literacy problem nationwide, let alone at the state or local levels. As the national panel on measuring progress toward the President's goals has commented, "None of the current national data provides a comprehensive national picture of adult literacy."[1]

The National Education Goals Panel has encouraged the early efforts to improve literacy assessment in the states, and has stressed the need for both baseline and tracking data to measure future progress.[2] All of us recognize that we must do more.

We are still basing policy on inferences from old national studies or studies done for a select age group.

In 1989, the Mississippi Literacy Foundation published *State Literacy Strategies: A Policy Primer*. The primer was designed to help state policymakers think through the steps they would have to take to develop effective and coherent state policies to improve adult literacy. One of the first issues addressed related to assessment.

To make good policy, the primer stressed, we need better numbers — numbers that are produced through assessments guided by our policy objectives. Since that time, a few states and the national government have taken significant steps to get those numbers, but a state-by-state effort to assess the unique situation in each jurisdiction will be required. This second primer has been produced to help state policymakers work through the thicket of policy, fiscal, political, and

technical issues so that we can achieve the first step — fully understanding the literacy status of Americans.

This primer is designed to provide a step-by-step guide for state policymakers and state agency officials who are interested in assessing the literacy skills of the people of their state. It will also be useful to local literacy providers, literacy volunteers, and private businesspersons who want to be informed about the importance of assessment and to understand their role in implementing a state literacy assessment.

The primer is divided into five chapters. The first chapter describes why it is important to assess the literacy skills in each of our states. Literacy is discussed as an economic necessity, a requirement for a healthy democracy, and a critical first step toward meeting our national literacy goal.

Chapter Two describes the five significant steps that have been taken since 1988 to improve our knowledge about literacy and provides examples of successful literacy assessments. Chapter Three reviews what we know about how to conduct an assessment and provides a step-by-step guide to designing and implementing a statewide literacy assessment. The experience of Mississippi and Oregon will be particularly useful in describing tools and techniques for other states.

This primer is designed to provide a step-by-step guide for state policymakers and state agency officials who are interested in assessing the literacy skills of the people of their state.

Chapter Four explores three options for conducting state literacy assessments. The first option involves participating in the National Adult Literacy Survey being conducted by the Educational Testing Service (ETS). The second option is conducting a separate statewide assessment. The third option — one that may be the most financially feasible — involves developing proxy measures by using secondary data and national surveys. The costs and benefits of each of these approaches are discussed as are the benefits of using multiple methods to refine each.

The final chapter includes a discussion of how the results of a state literacy assessment fit into an overall literacy policy strategy. This section includes a discussion of how the results can be used to advance welfare reform, economic development and education initiatives or other national or state policy goals.

CHAPTER 1

THE CASE FOR ASSESSMENT

The quality of our economic and social future depends upon the skill levels of our people.

Why do we need to assess the problem? Political leaders and citizens alike understand that the quality of our economic and social future depends upon the skill levels of our people. Why do we care if we know how many people are functioning at what skill level? Why should we spend considerable time and scarce resources to refine our estimates in each state when there are already national studies of literacy that give us ballpark estimates? When the problem is so big that we could never come up with the money to address all needs, why should we bother with state assessments of literacy?

Assessment is necessary to define the shape and depth of the literacy problem in America.

Assessing literacy skills is crucial for several reasons:

- Assessment is necessary to define the shape and specific dimensions of the problem.
- Resources are scarce and we must make informed decisions about resource allocation for literacy provision.
- We must carefully target policies and programs so that services can be matched to client needs and return on investment can be maximized.
- Accountability demands that we measure the impact of policies and programs on progress toward achievement of the national literacy goal.

Assessment is necessary to better allocate scarce resources.

Defining the Problem

As a result of years of media emphasis, a national consensus now exists that we have a serious literacy problem in the United States.

Assessment is necessary for reasons of targeting and accountability.

National figures tout the seriousness of the problem: 25 million to 75 million Americans are considered "illiterate," according to the national media. The image portrayed is of a vast sea of persons who struggle even to read a simple sentence or hide their lack of skills in shame. Most literacy policymakers and literacy professionals have mixed feelings about the picture portrayed in the national media and by most political leaders. We are pleased that national attention has been drawn to a very real issue — the low skill levels of many of our people — yet we are uncomfortable with the oversimplified picture of the problem. We also know that these oversimplifications are not adequate to make good policy. We know better — but we don't know enough.

Most literacy professionals have mixed feelings about the picture of literacy portrayed in the media.

From certain limited national studies, such as the English Language Proficiency Study (ELPS) and the National Assessment of Educational Progress (NAEP) study of twenty-one- to twenty-five-year-olds, and from the results of statewide studies in Oregon and Mississippi, we have a very different — if still incomplete — picture of the problem. Here is a summary of what we know:

- The vast majority of adults in the United States are not "illiterate" by the common-sense definition imagined by most citizens. Both the ELPS and the NAEP showed that more than 80 percent of adults can do things like read simple sentences or make rudimentary calculations. In Oregon, well over three-quarters of all adults achieved "basic" literacy skills as defined by a NAEP scale score of 275, which requires skills significantly above those required for the simplest literacy tasks. This finding is heartening, compared with the media-inspired public image.

- Large percentages of adults, however, cannot do more complicated tasks required for daily living. Nearly half of adults, for example, cannot solve a two-step math problem or follow the reasoning in a simple paragraph. In Oregon, only about 40 percent of adults reached the intermediate stage, including the ability to do more

complex tasks. Anecdotal evidence in the workplace suggests that many adults have extreme difficulty in reading manuals, following written directions, or solving relatively simple problems.

- Younger adults are better off than older adults. Despite high drop-out rates and pockets of very low skills among young people, our much-maligned education system does seem to be producing young people who have more skills than many of their parents. This stands to reason, since the average number of school years completed has been increasing over the years.

Most adults, although not "illiterate," cannot do more complicated tasks required for daily living.

The problem that emerges from the national studies that have been completed is not so much one of "illiteracy" among the few adults who simply cannot read or write, but of a "skills gap" between the basic level of literacy obtained by most adults and the increasing demands of work and society.

The national literacy problem is one of a skills gap for many people rather than a problem of "illiteracy."

The *real* problem is that basic literacy is not good enough anymore. If our economy had been static and the skills needed in the workplace had remained the same as twenty years ago, we would not be seeing advertisements for conquering "illiteracy." The issue for the nation, then, is not to provide the most basic skills to a small number of "absolute illiterates," but to raise the skills of millions of people who have some skills but not enough to compete effectively in a changing economy. This is not nearly as dramatic as the stories portrayed on television, but it is ultimately more important to our economy and democracy.

The issue facing the nation is to improve the skills of millions who cannot compete effectively in a changing economy.

The literacy requirements of the workplace are changing quickly. The Hudson Institute's *Workforce 2000* report projects that between now and the year 2000, the United States will face a growing mismatch between job skill requirements and skills of the available pool of workers. Current jobs requiring low skills will disappear. There will be a bifurcation in the types of new jobs created. Jobs now requiring mid-level skills — where most Americans work today — in the future

If large numbers of Americans don't improve their skills, they will be left behind—unemployed or trapped in low-skill, low-wage jobs.

will require fewer skills and pay low wages, while most new jobs will require higher skills. As a result, if vast numbers of Americans do not improve their skills, they will be left behind – either unemployed or trapped in low-skill, low-wage jobs. We face the prospect of a two-tiered economy, with a large number of people left out.

The skills gap can be closed only through education and training for adults.

If our economy is to keep pace, we must redress this growing skill imbalance. Workers must achieve basic competencies – those competencies that used to be associated with literacy – reading, writing, computation. They must also continuously upgrade their skills to keep pace with increasing skill demands in the marketplace. They must be able to reason, communicate well, and solve problems as well as read, write, and compute. Since about 80 percent of workers in the year 2000 are already in the labor force, the skills gap can be closed only through education and training for adults.

The growing complexity of society also demands a more literate citizenry. As in the workplace, the competition in the marketplace of ideas requires that citizens be able to reason, solve problems, and communicate. The future of the democratic process requires that people from all walks of life be able to comprehend and make judgments about ever more complex public issues. Unless people can read, write, and communicate more complex ideas, the danger exists that we will create a two-tiered political economy as well as a two-tiered money economy. This largely neglected reason for focusing attention on literacy is every bit as important as the economic consequences of low literacy levels in America.

A literate population is essential for a healthy political economy.

The literacy problem, then, is much more complex than simply teaching "illiterate" adults to read and write. Because of this complexity, it will be necessary for us to assess at what level people are functioning, and make some critical decisions about the resources necessary to move people along the literacy continuum. To do this well, we will need to know much more than we now know about where people are on the ladder, and about other facets of their lives.

Resource Scarcity

Literacy assessment would be important simply to define the problem more completely, but it becomes crucial when we face the scarcity of resources available to address the problem. States across the nation are facing unprecedented fiscal crises, with spending outpacing revenues in all but a few areas. Why spend scarce resources on another study of a massive problem?

We must be prepared to make critical decisions about resource allocation to move people up the ladder of literacy.

There are two reasons. First, we will have to spend some money to get the information we need to target other resources effectively. Policymakers will have to target resources to get the best results. Targeting resources means making tough choices. These choices cannot be made efficiently without the best information available.

Literacy assessment will enable policymakers to allocate scarce resources to support other objectives, such as economic development or welfare reform. Assessments will tell us the extent to which adult literacy is an important component of getting young children ready for school, a key education reform objective. Assessment can guide our targeting choices and help connect them with other major policy objectives.

Many states question the wisdom of spending scarce resources on a study of such a massive problem.

Second, assessment will tell us more about the people we are trying to reach through targeting resources. If we decide to target programs on the labor force, for example, we will need to know how many workers function and at what levels of skills. In addition, we will need to have an idea of whether their skill levels significantly hinder them in getting and keeping a job.

Most people assume, correctly, that welfare recipients are functioning at lower skill levels than working people. Literacy assessments can clarify the problem by quantifying the gap between recipients and the general population, and by drawing distinctions among different groups of recipients. If we decide that the best investment in literacy

We must get needed information to target scarce resources.

is to help low-income people improve their literacy skills, we need to know how many people need help. We need to know more about their living and working conditions as well.

Literacy assessments can quantify the gap between the literacy skills of social service recipients and the general population.

Investments in literacy assessment will pay off by improving our targeting decisions because scarce resources will not be wasted through improper targeting. Businesses spend millions on market research in order to "position" their products, but governments will target vast amounts of money based on hunches. We can do a better job by collecting the information we need before we direct the scarce resources available to potential students and programs.

Program Effectiveness

We also need better information to make decisions about the design and operation of literacy programs. Through years of difficult experience, we have learned that people respond differently to programs depending upon their level of literacy, their motivation to increase their skills, and their economic circumstances. This means that before we design and fund literacy programs, we need to know more about the circumstances of people who may seek improved literacy skills.

Before we design and fund more literacy programs, we need to know more about the circumstances of people needing improved literacy skills.

If you have a job and feel that improving your reading skills will lead to a better job, you are likely to find that a workplace-based literacy program is most effective for you. If you are a single parent with a small child, you may respond best to a family literacy program provided in your child's school. If you are on welfare or in prison, the program best suited to attract you and retain your interest will be different from the others.

State literacy assessments can give policymakers critical information about the distribution of skills and the circumstances of potential students so that programs can be designed more effectively. If state officials decide to target resources on the workforce, as many are, it will be helpful to know where workers with low skills are located,

what skill levels they have, and what industries are most in need of help. This can be particularly important if industries are threatened and literacy training can be made part of an economic development strategy to help an industry become more productive.

Program designs in the literacy field are changing. Literacy professionals know that traditional classroom settings often are not appropriate for many types of students. Better information about the literacy levels and circumstances of potential students will help program designers determine the mix of programs available to students. In addition, as experience teaches us which program designs are most effective with various student groups, policymakers and program managers will be able to adjust the programs to better serve students.

Accountability

Literacy providers and programs will have to compete for political attention and budgetary resources in an increasingly difficult fiscal environment. Increasingly, political leaders and the public are demanding to know the results of their investments in policies and programs, including investments in upgrading literacy skills. Assessing the literacy skills of the population in a state will provide a baseline for accountability: showing how well policies and programs are performing.

Assessing the literacy skills of the population in a state will provide a baseline for accountability.

In the past, most accountability systems have measured either inputs – such as dollars spent per pupil – or they have recorded information about the process of improving literacy skills, such as the number of instructional hours. In some cases, accountability systems in the literacy field have tried to assess the improvements made by individual students through testing. Neither of these approaches provides enough information to allow political leaders and the public to judge whether literacy improvement strategies are working. Nor are these approaches valuable when making the case for additional resources.

Without statewide assessment, we have no way of judging whether literacy strategies are working.

By assessing the literacy levels of entire state populations, it will be possible for the first time to determine whether programs and policies are succeeding over the long term. We will know whether we are making significant inroads in the literacy problems of specific student groups, such as welfare recipients or low-income workers. We will be able to document increasing skill levels among adults and understand the contribution of other reforms to improving adult literacy in general.

Ultimately, assessment information used over time will make the case for cost-effective investments in adult literacy. Without the information to make the case for the success of literacy initiatives, the danger is real that attention to literacy will become a passing fad in the political environment. With a program of regular assessments of the skill levels of the adult population, literacy policymakers can judge what is working, where new approaches must be developed, and whether or not the resources devoted to literacy are doing the job.

Assessment information will enable us to make the case for cost-effective investments.

The State Response

To date, the complexities of assessment and resource constraints have limited the state response to the case for assessment. In a report on the status of state efforts to address the literacy issue, the National Governors' Association noted that "state-specific literacy assessments are rare."[3] Most states have chosen to use existing data — primarily from the census — to estimate overall literacy levels. These estimates have been enough to raise the issue, but are not sufficient to guide policymakers in determining how best to allocate resources or design better programs.

More recently, several states have taken steps to address the assessment issue. Hawaii, Mississippi, Oregon, and the Commonwealth of Puerto Rico have conducted literacy surveys or attempted to estimate the size and shape of the literacy problem in some detail. Hawaii has contracted for a statewide literacy assessment based primarily on

program data, while Puerto Rico has conducted a sample survey in fifty municipalities with the highest rates of literacy problems. The experiences of Oregon and Mississippi will be highlighted in this primer because they have undertaken large-scale statewide assessments based on sample surveys.

In addition to these efforts, as of August 1991, twelve states — California, Florida, Illinois, Indiana, Iowa, Louisiana, New Jersey, New York, Ohio, Pennsylvania, Texas, and Washington — have agreed to participate in the National Adult Literacy Survey (NALS), which will be conducted in 1992. Since nearly 45 percent of the U.S. population resides in these twelve states, this plan will significantly improve the information available not only in these states but across the nation as a whole.

Three states — Mississippi, Oregon, and Hawaii — and Puerto Rico have attempted to estimate the size and shape of the literacy problem in some detail.

By the end of the decade, we will need to know how far we have moved toward meeting the national goal for a literate people. In the remaining sections of this primer, we will discuss the steps several jurisdictions have taken to assess the literacy status of their populations and focus on the key issues states will face as they decide how to respond to the case for assessment.

CHAPTER 2

LEARNING MORE ABOUT LITERACY: FIVE SIGNIFICANT STEPS

Until recently, policymakers have been forced to rely on proxy measures of literacy or on two national surveys to estimate the literacy status of their populations.

Until recently, state and national policymakers have been forced to rely on proxy measures of literacy, such as grade levels completed, or upon two national surveys to estimate the literacy status of the population — the 1982 English Language Proficiency Survey and the 1985 Survey of Young Adults.

Since 1988, however, literacy assessment has begun to flourish. Work has progressed on two major national surveys sponsored by the federal government. Two states – Oregon and Mississippi – have completed their own literacy surveys. Canada has also completed a national survey to directly assess the functional reading, writing, and numeracy skills of Canada's adult population.[5]

This chapter reviews the status of these five significant steps in assessing literacy. It also examines the similarities and differences among the five efforts.

The National Adult Literacy Survey (NALS)

The NALS will provide a baseline against which to measure progress toward our national literacy goal.

In late 1989, the National Center for Education Statistics awarded a contract to the Educational Testing Service to conduct a survey of literacy skills among adults sixteen to sixty-four years of age. About 13,000 adults will be assessed through face-to-face interviews consisting of forty-five minutes of simulation tasks and twenty minutes of background interviews. The survey will be conducted in households among a sample drawn from 1990 census information. In addition, ETS will draw a sample of 2,300 adults over the age of sixty-four, as well as a nationally representative sample of incarcerated adults to extend the reach of the NALS.

Two national committees have been formed to guide the development of the assessment. A Literacy Definition Committee has worked to define literacy more carefully, developing standards of functioning in society that relate to the use of printed materials to achieve personal goals. A Technical Review Committee is working to design instruments that can capture more information about adult functioning, using the same basic approach as the 1985 Survey of Young Adults.

According to ETS, "Adults will respond to reading, writing, speaking, and listening tasks that will require them to demonstrate a range of skills and knowledge that include recognizing, acquiring, organizing, interpreting, producing, and applying information found in various types of printed materials."[6] The NALS will continue the basic approach of the 1985 study, but will extend the concept to include increased emphasis on brief written or verbal responses. It will also include problems that require respondents to demonstrate problem-solving skills and the use of a simple calculator.

The NALS will continue the approach used in the 1985 Survey of Young Adults (the NAEP).

In addition to profiling adults according to the familiar document, prose, and quantitative literacy scales, the NALS will:

- Describe the types and levels of literacy demonstrated by the total adult population, adults within age groups and "at-risk" subgroups.
- Relate literacy skills to demographic and personal background characteristics.
- Relate literacy skills to current labor-market indices and occupational categories.
- Compare results with the 1985 young adult assessment and other national and international studies.

Because the NALS survey will be a national sample, however, its results will not be statistically valid for many states. As a result, ETS

THE NATIONAL ADULT LITERACY SURVEY

The National Adult Literacy Survey (NALS) is a household survey that will measure the literacy skills of a nationally representative sample of adults. To conduct the survey, the Educational Testing Service (ETS) was awarded a four-year contract in September 1989 by the National Center for Educational Statistics.

WHO WILL BE SURVEYED? About 13,000 adults age sixteen to sixty-four who live in private households and dormitories across the United States will be included in the survey. Because this is a national sample, not every state will be part of the national sample and adults sampled within a state will not necessarily be representative of the state itself. The NALS invites states to participate in a concurrent assessment that would provide detailed information on a state that is comparable with information derived from the national survey.

HOW WILL THE SURVEY BE CONDUCTED? The survey will be conducted by trained interviewers who are experienced with interviewing techniques and testing methodologies.

WHAT DEFINITION AND SCALE WILL BE USED? The NALS will use the definition and scale developed for the 1985 Survey of Young Adults. ETS has developed new simulation tasks to extend and enhance the 1985 literacy scales.

WHEN WILL THE SURVEY BE CONDUCTED? Field testing is taking place in 1991. The main assessment will be conducted in 1992. Results are expected in 1993.

HOW COMPARABLE WILL THE RESULTS BE TO OTHER LITERACY ASSESSMENTS? One of the major goals of the NALS was to be able to compare its results with other large-scale assessments of literacy. Results will be comparable with the 1985 NAEP conducted by ETS and the Workplace Literacy Project conducted by ETS for the U.S. Department of Labor. Results can also be compared with the Canadian literacy study and with the results of the assessments from Oregon and Mississippi.

WHAT TYPES OF INFORMATION WILL THE STUDY PRODUCE? Information from the study should enable users to: a) describe the types and levels of literacy demonstrated by the total adult population, adults within specified age ranges, and adults comprising "at-risk" subgroups; b) characterize and help explain demonstrated literacy skills in terms of demographic and personal background characteristics; c) profile the prose, document, and quantitative literacy skills of the American workforce; d) relate literacy skills to current labor-market indices as well as occupational categories; and e) compare assessment results with other large-scale literacy assessments.

FOR FURTHER INFORMATION: Contact Irwin Kirsch, Project Director, Educational Testing Service, Rosedale Road, Mail Stop 05-P, Princeton, NJ 08541; 1-800-223-1267.

Source: National Adult Literacy Survey; Educational Testing Service; and Irwin Kirsch of the Educational Testing Service.

has invited states to participate in a concurrent assessment that will extend the sample in order to provide valid data for that state. Twelve states have chosen to participate, and work is underway. Although the opportunity for participation in the first round of the NALS survey has passed, states will be able to use the NALS system for future surveys, if interest warrants.

Because the NALS will be a national sample, the results will not be statistically reliable for every state.

The NALS will be administered in 1992. When the results are available in 1993, a number of reports will be generated to address specific interests. In addition to the public report on overall NALS results, ETS will produce more specialized reports for the education and business communities, a technical report, a report for those concerned with literacy among the elderly, and a report on the literacy status of incarcerated adults. Finally, separate reports will describe results in each of the participating states.

U.S. Department of Labor Workplace Literacy Project

Future participation with ETS using the NALS system is possible.

The Department of Labor has also contracted with the Educational Testing Service to assess the literacy proficiencies of enrollees in the Job Training Partnership Act (JTPA) program, persons applying for jobs through the Employment Service system, and unemployment insurance claimants. A second phase of the program will involve developing tests to assess individual proficiencies.

The Workplace Literacy Project (WLP) survey used the 1985 Survey of Young Adults tasks and other tasks to enhance the original prose, document, and quantitative scales. In total, about 200 literacy tasks were included in the survey, although not every respondent performed the same simulations. In addition, more comprehensive background information was collected, including attitudes toward literacy skills and social activities related to literacy performance. About 8,000 persons were surveyed from October 1989 through April 1990 in seventy JTPA service delivery areas located in seventeen states.

Final reports from the WLP have not been released, but as yet unpublished preliminary results show that JTPA clients scored significantly lower on simulated tasks than either young adults in 1985 or unemployment insurance claimants in the 1989 WLP survey. On average, job training clients scored about 280 on the overall scale, compared with about 290 for unemployment insurance beneficiaries in the WLP survey and about 305 for young adults age twenty to twenty-five in the

THE WORKPLACE LITERACY PROJECT

In an effort to improve the nation's understanding of the literacy problems in the United States, the U.S. Department of Labor (DOL) commissioned the Educational Testing Service (ETS) to conduct a two-stage workplace literacy assessment. The first stage is an assessment and profile of the literacy proficiencies of three populations served by the Department of Labor. The second stage involves the development of a test by ETS for assessment of the literacy proficiencies of individuals in various DOL populations.

WHO WAS SURVEYED? The assessment included three groups totaling about 8,000 persons: persons enrolling in Job Training Partnership Act (JTPA) programs, persons applying for jobs through the Employment Service (ES) system, and persons filing claims for Unemployment Insurance (UI) benefits.

HOW WAS THE SURVEY CONDUCTED? To profile the proficiencies of the three literacy populations, the workforce literacy survey included a total of 200 literacy tasks. A procedure known as "BIB spiraling" was used so that each person responded only to a subset of the assessment tasks. In addition, each participant was interviewed by an ETS-trained administrator using a background questionnaire.

WHAT DEFINITION AND SCALE WERE USED? The proficiencies profile was based on an original set of simulation tasks developed by the Survey of Young Adults (NAEP) done in 1985. New tasks were added to extend and refine the three literacy scales developed by NAEP. For the background questionnaire, a number of questions were replicated from the NAEP to enhance its comparability. Others were adapted from the NAEP and still others were newly developed to reflect issues of major concern to DOL.

WHEN WAS THE SURVEY CONDUCTED? Data was collected between October and April of 1990. Results will be made available by DOL in late 1991 or 1992.

HOW COMPARABLE WILL THE RESULTS BE TO OTHER LITERACY ASSESSMENTS? One of the major concerns of the Workforce Literacy Project was to be able to compare its results with other large-scale assessments of literacy. Results will be comparable with the 1985 Survey of Young Adults conducted by ETS and the National Adult Literacy Survey. Results can also be compared with the Canadian literacy study and with the results of the assessments from Oregon and Mississippi.

WHAT TYPES OF INFORMATION WILL THE STUDY PRODUCE? Findings will help to anticipate problems that must be faced in training and retraining significant segments of the American workforce. The study will also be able to provide states and agencies with national data and a survey methodology that can be used to conduct their own assessments and compare their results with national data. Finally, tests will be developed that can be used to assess the literacy competencies of individuals.

FOR FURTHER INFORMATION: Contact Jules Goodison, Project Director, Educational Testing Service, Rosedale Road, Princeton, NJ 08541; 1-800-223-0267.

Source: Workplace Literacy, A Project Conducted by ETS for the Department of Labor; Educational Testing Service; Ray Uhalde, U.S. Department of Labor; and Irwin Kirsch, Educational Testing Service.

previous survey. Among JTPA clients, women scored higher than men by about 35 points, and among unemployment insurance beneficiaries, females outscored males by nearly 50 points. Higher scores were also recorded by those with more substantial work histories and by those actively seeking work.

The Workplace Literacy Project will assess the literacy proficiencies of JTPA enrollees, Employment Service applicants, and UI claimants.

Although this survey was limited to a subset of the workforce, primarily those in the lower socioeconomic and skill levels, it should provide greater depth of information than other surveys. The background information collected was more extensive and the number of job-related tasks was greater than other surveys.

The Mississippi Literacy Assessment

While the federal government began the process of developing national surveys, Mississippi's Office for Literacy determined that a statewide assessment of literacy proficiencies was required to develop and sustain a comprehensive literacy policy in Mississippi. Mississippi literacy professionals believed that the severity of the literacy problem in their state and the urgent need to develop and implement comprehensive strategies to meet the needs of Mississippi's adult learners meant that waiting to participate in the NALS would not be sufficient. It was likely, they thought, that Mississippi would exhibit a different mix of literacy problems than national data could reveal.

The Mississippi Literacy Assessment provides a level of detail otherwise impossible to achieve.

Although Mississippi policymakers decided to conduct a separate assessment survey, they also drew upon federal experience by utilizing a slightly modified version of the survey instrument that was developed for the DOL Workplace Literacy Project and was likely to be used in the NALS survey. The result was a survey instrument that could be compared with future surveys, including both the WLP survey and the NALS.

Working under the direction of the Office for Literacy, the Social Science Research Center at Mississippi State University conducted a survey of 1,803 Mississippi adults age sixteen to seventy-five during 1990. A one-hour session of simulation tasks based on the WLP survey was administered together with a half-hour background questionnaire. The background questionnaire was modified to elicit additional information on those providing literacy assistance as well as those receiving it, because Mississippi officials wanted to know how people

THE MISSISSIPPI LITERACY ASSESSMENT

The Mississippi Literacy Assessment Project grew out of the recognized need for reliable information about literacy within Mississippi that would be representative of the adult population in the state, be based on the most advanced literacy measurement techniques, and include a wide range of background information. Building on the DOL Workplace Literacy Survey, the Mississippi Social Science Research Center conducted the survey for the state.

WHO WAS SURVEYED? The Mississippi assessment was based on 1,803 household interviews of Mississippi adults age sixteen to seventy-five.

HOW WAS THE SURVEY CONDUCTED? One-and-one-half-hour interviews were conducted for each survey respondent. The first hour was devoted to the administration of the NAEP adult literacy assessment developed by ETS. The remaining half hour was used to collect demographic and personal background data. A modified version of the NAEP-Young Adult Background Questionnaire was used to collect this information. Initially, the Social Science Research Center attempted to use non-professional interviewers and to train its own interviewers. Because of difficulty with this approach, they switched early in the process to using professional interviewers. ETS performed the data analysis.

WHAT DEFINITION AND SCALE WERE USED? The survey assessment instrument was developed by the Educational Testing Service and first used in the 1985 Survey of Young Adults (NAEP) conducted by ETS. It is essentially the same instrument used by DOL in its Workplace Literacy Survey.

WHEN WAS THE SURVEY CONDUCTED? Interviews were conducted during 1990. Results were made available in April of 1991.

HOW COMPARABLE ARE THE RESULTS TO OTHER LITERACY ASSESSMENTS? Mississippi's literacy assessment was done concurrently with the Oregon assessment and the DOL Workplace Literacy Survey. All three were based on the same survey design and thus the results will be comparable. In addition, the NALS uses the same scale scoring system, thus all results will be comparable.

WHAT TYPES OF INFORMATION DID THE STUDY PRODUCE? The assessment resulted in a profile of the literacy skills of the population of the state, showing the size of the group with very low literacy skills, the demographic and economic characteristics of those whose literacy skills are on the low end of the continuum, the average literacy level for the state as a whole, literacy profiles of those receiving government assistance, and the geographic distribution of the literacy problem.

FOR FURTHER INFORMATION: Contact Arthur Cosby, Social Science Research Center, Mississippi State University, P.O. Box 5287, Mississippi State, MS 39762; (601) 325-7127.

Source: The Mississippi Literacy Assessment, A Report to the Mississippi Employment Security Commission and the Governor's Office for Literacy, State of Mississippi, April 1991; Karl Haigler, former Special Advisor to the Governor, Office for Literacy, State of Mississippi; and Art Cosby, Social Science Research Center, Mississippi State University.

with very low basic skills got help from others in handling the tasks of everyday life. They suspected that there was an extensive, informal network of "literacy providers" helping people who had trouble reading and writing. The background questionnaire also elicited information on the importance and frequency of the use of various prose, document, and quantitative skills in the workplace.

The Mississippi assessment used essentially the same instrument as the WLP and will be comparable with the NALS as well.

Released in April 1991, the Mississippi Literacy Assessment showed that Mississippi's literacy problems are severe but that most Mississippians possess basic reading and writing skills. Among adults in Mississippi aged sixteen to seventy-five, very few nonreaders were found. Fewer than 2 percent could not sign their name on a Social Security Card, for example, while more than 90 percent could read simple instructions on a medicine bottle or read a road sign.

The survey found that the average Mississippian functions at the 260 level on the prose, document, and quantitative literacy scale developed by ETS. While document literacy was relatively weak, the survey found, quantitative literacy was relatively strong. Public assistance recipients had substantially lower scores than non-recipients. Black adults also scored somewhat lower than whites, and persons over age sixty-five had lower scores than the general population.

The survey has enabled state policymakers not only to determine relative skill levels of adults distributed by age, race and sex, but also to understand the distribution of skills according to occupational categories. Mississippi officials wanted to know skill levels by occupation because they plan to link literacy efforts closely with other gubernatorial agendas, especially economic development.

The Mississippi Office of Literacy decided that a statewide assessment of literacy proficiencies was an essential step in building a comprehensive literacy strategy.

Of particular importance was the distribution of skill levels according to sub-state geographic regions and occupational groups. Because the sample size was large enough, analysts were able to estimate the size and shape of the literacy problem at the county level, a key factor in building the political support for expanded efforts to improve literacy.

In addition, the Mississippi Social Science Research Center performed sophisticated statistical analyses to attempt to determine the relative strength of the effects of race, mother's education, and respondent's years of education. They found a very high correlation between literacy scale scores and the mother's level of education, as well as correlations between literacy scores and the race of the respondent and the level of education of the respondent.

The Mississippi Literacy Assessment provided a level of detail impossible to achieve by trying to "back into" estimates of skill levels by examining proxy data, such as driver's license tests or years of schooling completed.

The Oregon Literacy Assessment

The Oregon Literacy Assessment resulted from a statewide effort to set "benchmarks" for performance in a wide variety of areas. In 1990, the Oregon Progress Board established an extensive public process to set measurable benchmarks for progress in the state. The program, reported in *Oregon Benchmarks: Setting Measurable Standards for Progress*, is an effort to make strategic planning a continuing part of Oregon's public policy decisionmaking. Both the survey and the benchmarks grew out of a 1989 economic strategy report, *Oregon Shines*, which identified workforce quality as a key development initiative.

The adult literacy indicators are among a set of benchmarks, beginning with prenatal care, that measure the growth and development of Oregonians. Information gathered in Oregon's literacy survey will influence education system reform at all levels, development of an integrated workforce development policy, and an extensive examination of the returns from investments in education and preventive social services.

To gather information for the adult literacy benchmark, the Progress Board conducted a survey of 2,000 adults age sixteen to sixty-five statewide. The sample was sufficiently large to identify results from five geographical regions in the state. Based on the NAEP approach, the survey included a twenty-minute respondent background questionnaire and a sixty-minute literacy assessment. The background questionnaire elicited information on age, race, sex, income level, occupation, and other variables. Private survey research firms drew the sample and administered the simulation tasks and background questionnaire.

THE OREGON LITERACY SURVEY

The Oregon Literacy Survey grew out of Oregon Benchmarks, a program begun in 1990 by the Oregon Progress Board to set goals for the state's future. In January of 1991, the board published Oregon Benchmarks: Setting Measurable Standards for Progress, which identified indicators of well-being, quality of life, and economic health. Building a world-class workforce is seen as a key to the state's future. Levels of literacy were chosen to define benchmarks for progress and a starting point for setting improvement goals.

WHO WAS SURVEYED? The Oregon survey included 2,000 adults age sixteen to sixty-five. The survey population was selected from five regions of the state, stratified to provide geographic distribution.

HOW WAS THE SURVEY CONDUCTED? Private survey research firms developed the sample design and performed the data collection. The data collection included a proficiencies profile similar to those administered in the Mississippi and Workplace Literacy assessments and a background questionnaire. The Educational Testing Service (ETS) performed the data analysis and university professionals and state government officials performed the interpretation and report writing.

WHAT DEFINITION AND SCALE WERE USED? The survey instrument used was developed in 1985 by ETS for the Survey of Young Adults. It was adapted and expanded for the 1990 U.S. Department of Labor Workplace Literacy Project.

WHEN WAS THE SURVEY CONDUCTED? The original design was begun in 1988 in the development of Oregon Benchmarks. Interviews were begun in February 1989. Survey results were available in May 1991.

HOW COMPARABLE ARE THE RESULTS TO OTHER LITERACY ASSESSMENTS? Oregon's literacy assessment was done concurrently with the Mississippi assessment and the DOL Workplace Literacy Survey. All three were based on the same survey design and thus the results will be comparable. In addition, the NALS uses the same scale scoring system making it comparable as well. The Canadian survey was also based on a NAEP-like scale and can be compared with these study results too.

WHAT TYPES OF INFORMATION DID THE STUDY PRODUCE? Results show the literacy skills of Oregon's population in three ways: as a whole, in comparison to the 1985 NAEP survey, and by several sub-groups including age, educational attainment, household income, and labor force status.

FOR FURTHER INFORMATION: Contact Tim Houchen, Oregon Progress Board, 775 Summer St. NE, Salem, OR 97310; (503) 373-1220.

Source: The Oregon Literacy Survey, Oregon Progress Board, May 1991, and Tim Houchen of the Oregon Progress Board.

The Oregon Literacy Assessment was part of a larger process to set measurable benchmarks for program performance.

The survey design was undertaken in 1989 and interviews commenced in April 1990. Initial survey results were published in April 1991. The Oregon survey enabled the Progress Board to examine the literacy skills of the population by age, race, sex, and geographic region, as well as by educational attainment, household income, and labor force status. In addition, the use of the NAEP scales involving prose, document, and quantitative literacy allows comparisons with other surveys.

The board established three categories of "fundamental literacy skills" — basic, intermediate, and master skills. They found that on the prose scale, 78 percent of Oregonians achieved the basic level, 41 percent the intermediate level, and nearly 9 percent the master level. On quantitative literacy scales, about 80 percent achieved the basic level, 39 percent the intermediate level, and nearly 8 percent achieved the master level. About 76 percent of Oregonians achieved the basic level on document literacy, 36 percent achieved the intermediate level, and only about 6 percent achieved the master level. As in Mississippi, adults had more trouble with document literacy tasks than with prose or quantitative tasks.

The Oregon assessment can be compared with the WLP, the NALS and the Mississippi assessment.

Interpreting the results, the Progress Board concluded that "the vast majority of Oregonians can read and interpret simple documents and handle simple math problems, but once tasks become more complex, their skills falter. Many of those surveyed could not handle some of the more complex situations that routinely arise in daily life."[3]

The state-specific survey enabled the Progress Board to set benchmark targets for adult literacy for the years 1995, 2000, and 2010 in a more measurable and specific way than in any other field. The Progress Board plans to repeat the survey at regular intervals so that results can be compared with benchmark targets over the years.

Canada's Survey of Literacy Skills Used in Daily Activities

In October 1989, Statistics Canada conducted a survey designed to assess the literacy skills of adults age sixteen to sixty-nine on behalf of Canada's National Literacy Secretariat. The survey consisted of home interviews and involved a series of new simulation tasks similar to those used in the 1985 Survey of Young Adults. The Canadian study also used a similar scale and method of scoring as the 1985 study. Administered as part of the Monthly Labor Force Survey, the assessment employed three questionnaires:

- A background questionnaire that included information not only on socioeconomic and demographic status but also on parental education and self-perceived literacy skills and needs.

- A screening test questionnaire to identify individuals with very limited literacy abilities.

- A main test questionnaire aimed at measuring specific reading and writing skills, as well as "numeracy abilities."

The Canadian survey defined four levels of reading skills for literacy. Respondents were placed at their level of consistent performance. At reading Level 1, for example, adults "have difficulty dealing with printed materials. They most likely identify themselves as people who cannot read." Individuals fell into Level 1 if they had less than an 80 percent probability of correctly answering items with a difficulty of 150 or higher on the NAEP scale. Canadians at Level 2 "can use printed materials only for limited purposes, such as finding a familiar word in a simple text." Level 2 individuals had a less than 80 percent probability of correctly answering items with a difficulty of 205 or above. Level 3 respondents "can use reading materials in a variety of situations provided the material is simple, clearly laid out, and the tasks involved are not too complex." Level 3 individuals had less than an 80 percent probability of correctly answering items at the 245 level or above. Finally, Canadians at Level 4 "meet most everyday reading demands" and exhibit "a wide range of reading skills." Level 4 individuals had at least an 80 percent probability of correctly answering items with a difficulty above 245.[4] Numeracy scores were divided into three levels, and writing skills were judged by the ability to perform certain specific and experimental tasks.

In order to get a large enough sample to permit valid cross tabulations and provide some geographic specificity, Statistics Canada surveyed about 9,500 adults. The sample was derived from the monthly Labour Force Survey, a regular large-scale survey used to elicit economic

THE CANADIAN SURVEY OF LITERACY SKILLS USED IN DAILY ACTIVITIES

Canada's National Literacy Secretariat wanted to conduct a credible national survey of the literacy skills of the nation. A national assessment of literacy had been conducted in 1986-87, but the methodology and hence the results were highly controversial. The National Literacy Secretariat turned to Statistics Canada, the national data collection agency with an impeccable reputation, to conduct this survey.

WHO WAS SURVEYED? The Canadian study included a sample of 9,500 adults between the ages of sixteen and sixty-nine.

HOW WAS THE SURVEY CONDUCTED? The survey was attached to the Monthly Labor Force Survey of Statistics Canada. This approach allowed significant costs for survey design to be absorbed through the labor force survey design. The survey consisted of home interviews and involved a series of simulation tasks. The survey used three questionnaires: a background questionnaire on socioeconomic and demographic variables, parental education and self-perceived literacy skills and needs; a screening test questionnaire to identify individuals with very limited literacy abilities; and a main test questionnaire aimed at measuring specific reading and writing skills and what Canadians call "numeracy skills."

WHAT DEFINITION AND SCALE WERE USED? Building on the NAEP assessment instrument, the Canadian study combined the document and prose categories of literacy into a reading scale, which was heavily weighted toward document literacy. Statistics Canada radically streamlined the items used, used a separate numeracy scale, and added some writing tests. The scoring and scaling of the results used the same technology as the 1985 Survey of Young Adults.

WHEN WAS THE SURVEY CONDUCTED? Canada's Survey of Literacy Skills Used in Daily Activities was conducted in the fall of 1989 by Statistics Canada on behalf of Canada's National Literacy Secretariat. Results were made available in 1990.

HOW COMPARABLE ARE THE RESULTS TO OTHER LITERACY ASSESSMENTS? Since the Canadian survey was based on the NAEP scoring and scaling technology, results can be compared with the NAEP, the NALS, the DOL Workforce Project, and the Mississippi and Oregon assessments.

WHAT TYPES OF INFORMATION DID THE STUDY PRODUCE? Results were divided into four levels: 1) people who have difficulty dealing with any printed material; 2) people who can use printed material only for limited purposes, such as finding a key word; 3) people who can use reading materials in a variety of situations provided the material is simple and well laid out and the tasks are not too complex; and 4) people who can meet most everyday reading demands. Results were reported by age, sex, income, and province. The study also enabled Canadian researchers to identify a set of economic and demographic indicators highly correlated with literacy —proxy measures for literacy.

FOR FURTHER INFORMATION: Contact Gilles Montigny, Household Surveys Division, (613) 951-9731, or Scott Murray, Special Services Division, Statistics Canada, (613) 951-9426.

Source: Guide to Literacy Levels on the Survey of Literacy Skills Used in Daily Activities, Statistics Canada, and Cathy Chapman, Canadian Department of Multiculturalism and Citizenship.

indicators. Results were reported by age, sex, income, and province, an important difference from planned national surveys in the United States. Because there are only ten provinces in Canada, a sample of 9,500 is large enough to permit provincial breakdowns. To ensure

The Canadian Survey assessed reading, writing and numeracy skills and categorized results according to four levels of performance.

statistically valid results in all fifty of the United States would require a much larger survey sample.

When results were made available in 1990, Canadian literacy professionals were concerned by the low skill levels measured by the survey. Even after discounting the 1 to 1.5 percent of adults who had such low skill levels that they could not take the test, the Secretariat reported that about 16 percent of Canadian adults scored below 200 on the scale used. Only about 62 percent of adults scored above 250, the threshold of Level 4. Only about 15 percent of adults scored over 300 on the scale.

Five recent broad-based assessments have vastly improved our ability to understand the dimensions of the literacy problem.

Divided among the defined levels, Canadian adults age sixteen to sixty-nine had the following characteristics on reading skills. About 6.6 percent were in Level 1, 9.4 percent in Level 2, 22.1 percent in Level 3, and 61.9 percent in Level 4.

These five studies have significantly improved our ability to assess the literacy status of adult populations in the states and across the nation. From these experiences, we can learn much about the value of statewide literacy assessments, survey and analytical methodologies, quality control, and financing. The next chapter provides an analysis of key questions that must be addressed in the design and execution of a statewide literacy assessment.

CHAPTER 3

DEVELOPING A STATEWIDE ASSESSMENT

Embarking upon a statewide literacy assessment requires careful consideration of the assessment strategy the state will pursue. A fundamental decision will be whether to seek primary information from the population or to rely on secondary sources of information — that is, information already collected. The results of major literacy surveys have shown that literacy levels are highly correlated with characteristics of adults that may be available from secondary sources. In both Mississippi and Oregon, for example, literacy levels were associated with the mother's level of education, the years of education received by respondents, and other socioeconomic characteristics.

By using secondary data about the characteristics of adults and relating these characteristics to studies such as the WLP, the Canadian study, and the two state assessments, it should be possible to learn a substantial amount about the literacy levels of adults on a statewide basis and among the clients of certain programs. Several of the recent literacy surveys, for example, determined that recipients of public assistance had significantly lower literacy levels than full-time workers. If the state is focusing policy attention on the literacy of public assistance recipients, using data on the characteristics of these recipients and data from other studies on literacy levels should allow policymakers to make informed choices about literacy services to these people.

Whether or not to use proxy measures depends, in large part, on the level of geographical and other detail needed by state policymakers. In short, it depends on the uses of the information desired by state officials. If state policymakers are considering a literacy assessment in order to target resources statewide, for example, a short-term solution may be to do a study based on secondary, proxy measures. If,

on the other hand, state policymakers need to target resources according to occupation or geographic region, a survey may make the most sense.

In general, using proxy data is less expensive than other methods but has major drawbacks. The most important drawbacks are that the resulting information will not be as detailed and that it will be very difficult to measure progress over time. This is because most proxy data will not change even if literacy levels improve as a result of state efforts. No matter how much literacy instruction a person gets, for example, their mother's level of education will not change.

Because states are in fiscal difficulty, it may be necessary to use secondary data for literacy assessment in the short term, while planning for a more comprehensive assessment using survey data later, when more resources become available. In this section, we assume that the state is seriously considering a survey assessment, either in conjunction with a secondary data study or as the primary vehicle for literacy assessment. Later in this primer, we will discuss the methods of using secondary data for literacy assessment, as well as the advantages and disadvantages of such an approach.

Here are seven key questions that should be answered before embarking upon a statewide literacy assessment survey:

States should think through seven key issues if they decide to conduct an assessment of literacy proficiencies.

1. How will the information be used?

2. What skills should be assessed?

3. Who will be assessed?

4. What is the timing of the assessment?

5. Who will conduct the assessment?

6. How will quality control be assured?

7. How will the assessment be financed?

Question #1: How Will The Information Be Used?

The first, and most crucial, step in undertaking a statewide literacy assessment is to consider how the information gathered will be used. Literacy assessment information can be used by several key constituencies. First, political leaders, the media, and the public will want to know the overall literacy status of the population. Second, policymakers will use the information to target resources and develop strategies for improving literacy. Third, program developers will use the information on skill levels and client characteristics to design programs that are more likely to succeed. Finally, all of these groups can use assessment data over time to see whether policies and programs are working.

Understanding how the information will be used will help clarify the scope of the assessment.

For each of these uses, a set of constituencies exist that must be understood before decisions can be made on the scope and content of the literacy assessment. Many people will want to use information on literacy status by sub-state geographical region and by categories such as race and sex to advocate for programs and policies serving these areas or groups. Political leaders will be influenced by the overall size of the literacy problem. Program development people in agencies will want information about the characteristics of target populations. Providers will want to know how many people need to be served in their communities or sub-state regions.

It is a good idea to talk to each of the potential constituencies for literacy information before the design of a literacy assessment is underway. The "consumers" of assessment information will be able to clarify what information they really need, and what information they would like to have. They should also be asked to consider the reporting formats, how many public and internal reports must be generated, and begin to discuss the types of analysis that must be

accomplished to make the raw data useful. Understanding how the information is to be used will help clarify the scope of the assessment, and help answer questions 2 through 7.

Question #2: What Skills Should Be Assessed?

The second step in a statewide assessment is to decide what dimensions of adult literacy to assess. If the primary use of the information is to develop a statewide literacy strategy, as in Mississippi, for example, getting information on the distribution of the adult population along a continuum of skills will be the primary objective.

Most researchers assessing literacy have decided that the best way to measure the distribution of skills along the literacy continuum is to adopt an approach similar to the 1985 Survey of Young Adults, or a "portable skills" measurement across a broad spectrum of skills useful in daily living. By using scales in categories such as document, prose, and quantitative literacy, the greatest amount of information is collected about a wide variety of skills in the population. On the other hand, if the primary emphasis of the assessment is to focus on a subset of the literacy problem, such as literacy levels among welfare recipients, the unemployed, or the incarcerated, policymakers may want to include more extensive assessment of functional skills related to job training or placement.

All of the studies described in this primer have used some variant of the simulation task and scale pioneered in the 1985 NAEP.

All of the studies described in Chapter Two used some variant of the simulation task and scale pioneered in the 1985 Survey of Young Adults undertaken for the National Assessment of Educational Progress. The federal government, Mississippi, Oregon, and Canada chose this approach not only because it is the "state of the art" in assessment, but also because resulting data could be more easily

compared with other studies if the scales and scoring techniques were identical. At the same time, each differed somewhat on the skills and background characteristics they sought to measure. In the Department of Labor study, for example, more job-related assessment was sought through an extensive battery of 200 simulated tasks. By rotating tasks among the respondents, the assessment designers were able to get a more extensive and deeper measurement of job-related skills.

In Canada, the emphasis was on measuring skills for everyday living. The assessment concentrated on the lower to middle areas of the literacy continuum, with fewer of the tasks oriented toward relatively high levels of prose functioning, such as poetry interpretation (which was found in the Survey of Young Adults and some other studies). In Oregon, the motivation for the study was not only to assess literacy skills for policymaking purposes, but also to set a benchmark for the future. As a result, the emphasis in the Oregon study was on assessing tasks useful in everyday life. Oregon officials were careful to make sure that tasks could be measured again in the future, so that progress toward the benchmarks could be judged.

Communications, problemsolving, and writing skills are more difficult to assess than reading and math skills.

State policymakers also need to consider whether the document, prose, and quantitative skill categories make sense for them. Within these categories, choices must also be made concerning the measurement of communications, problemsolving, and writing skills. While these skills have been identified as important to the workforce of the future, they are more difficult to assess than simple reading and quantitative skills. The NALS and the WLP both have extended the ETS scales to attempt to assess communications and problemsolving skills. The Canadian survey is the only one among the five examples to attempt to assess writing skills, through two experimental tasks: writing a note to the family instructing them to turn on the oven and writing a letter to repair an appliance.

The choice of measures will also be influenced by the overall strategy of the state in gathering data for policymaking and accountability. If

state officials believe that a general statewide assessment is necessary, as they did in Mississippi, they will want to assess the literacy skills across the entire continuum in categories such as document, prose and quantitative literacy. If they decide to rely upon national surveys to provide enough data for general policymaking, they may still want to use a different methodology to learn more about particular parts of the literacy continuum. To strengthen the information base about literacy in the workforce, for example, the state may want to combine data from the NALS and the DOL Workplace Literacy survey, and gather other information on workplace literacy through a third survey.

Question #3: Who Will Be Assessed?

A closely related issue is deciding what populations should be assessed. Do you want to assess the literacy skills of all adults in the state? If so, you need to define "adult." Are adults considered to be those age sixteen to sixty-nine, as in Canada, sixteen to sixty-five as in Oregon and the NALS, or sixteen to seventy-five as in Mississippi? Do you want to focus on literacy status in the workplace? If so, you need to decide whether you want to assess current workers, the unemployed, or the labor force as a whole. What about young people just about to enter the labor force?

The choice of the types of adults to be surveyed should be informed by the purposes of the assessment. If the intent is to assess the entire adult population, then the basic decision is defining the age range of "adults." Whether or not the state decides to use a national survey, use the NALS system, or do its own assessment, the basic socioeconomic, age, sex and race variables will be picked up in any reasonably large sample.

More difficult choices will have to be made if the state wants to concentrate on particular sub-groups of the population, participants in specific programs or people residing in sub-state geographical areas. National surveys do not have samples large enough to distinguish major sub-groups of the population, program participants or people living in smaller geographical areas. In fact, most states are not large enough even to show up reliably in national samples. That is why the NALS sponsors offer states the option to extend the national survey to a larger sample at the state level.

In designing an assessment, states will face a difficult decision between cost and detail.

State officials should also think carefully about the ways in which data will be reported. In general, the more cross-tabulations, the larger the sample must be. If you want to report literacy levels by age break-downs, such as sixteen to eighteen, nineteen to twenty-one, and over sixty-five, for example, it will take a larger sample to ensure reliability of the results. If you want to break down the information not only by variables such as age, race, and sex but also by five or ten sub-state geographical areas, the sample size must be correspondingly larger.

Survey designers have always faced the trade-off between the desire to know as much as possible at the lowest level of detail and the costs associated with larger sample sizes. The way to make this trade-off less difficult is to focus clearly from the beginning on what level of detail is absolutely necessary for the assessment. Do you really need to know literacy levels by several age ranges in sub-state geographical areas? How much detail do you need to have about the literacy levels of people of different incomes? Can these income ranges be relatively broad? Because of regional political and economic differences in a state, the sub-state geography may be very important. If it is, can you trade off with larger age ranges or fewer income levels?

Another way to address this trade-off is to assess a few basic pieces of information about an entire population, but seek to find out much more about a sub-group that is particularly important in policy terms. This can be accomplished either by using results from a national

survey, if the sample size is large enough in a state, by using socioeconomic data as a proxy, or sponsoring a statewide survey with a relatively small sample. Then, a more detailed survey can be made of a target group of people in which the policymaker is interested. In either case, by defining carefully the groups within the population about whose literacy levels are especially valuable, state officials can save time and effort in the long run.

Question #4: What is the Timing of the Assessment?

Because we are eager to get the job done, we all want the best information as soon as we can get it. Yet unless state officials choose to use surrogate measures for literacy assessment, none of the options for literacy assessment will be available in the short term. The NALS data will not be available until the fall of 1993 at the earliest. A state assessment similar to Mississippi's or Oregon's will take more than a year — perhaps two — to develop, fund, and collect and analyze data.

If good information is urgently needed, it may be wise to use proxy information, such as socioeconomic data from the 1990 census, and attempt to "back in" to reasonable estimates of the extent of literacy skills in various populations. In the mid- to longer term, a separate statewide assessment could be conducted in about one to one and one-half years from start to final report.

Another factor related to timing is whether or not the state plans to assess literacy levels on a regular basis over time. In order to find out whether or not policies and programs are working, it would be best to plan regular assessments on a three- or five-year schedule. Information collected from the CASAS system or through the use of the TABE

test can also be used to see if progress is being made, although care should be given to using individual testing instruments that are closely related to the survey instrument.

To assess whether programs are working, it would be best to assess literacy levels on a regular basis.

If the state plans regular assessments, it becomes especially critical to scrutinize key decisions on what kinds of skills are being assessed and who is being assessed, because these decisions will have to stand the test of time. While it will be possible to adjust future surveys, for example, the basic parameters of those surveys must remain the same for a valid time-series of indicators to make sense.

Question #5: Who Will Conduct the Assessment?

Who implements a statewide literacy assessment will depend largely upon the strategy developed by answering questions 1-4. In most cases, a state government will prefer to contract out the design and implementation of the study. If the state decides to use the NALS system, for example, an arrangement can be made with the Educational Testing Service. If the state decides to do an additional study of its own, it can contract with a university survey research operation or a private firm for the study. If the state chooses to use proxies for a near-term assessment, outside expertise will still probably be needed.

Both Oregon and Mississippi contracted for their surveys and data analysis. Mississippi contracted with an arm of the university system and used the Educational Testing Service for survey design and data analysis. The university team also completed extensive interpretation and report writing. Oregon contracted with a private survey research firm to perform the survey and used ETS for data analysis. In addition, university professionals and state government officials helped interpret the data and write the reports. In Canada, the survey was attached

States should take advantage of professional help in designing and conducting their literacy assessments.

to a regular survey completed monthly by Statistics Canada, the government's statistical agency. Both Oregon and Mississippi officials stress the importance not only of letting professionals actually do the survey work, but also of close monitoring and a close working relationship with those who actually perform the survey. Canadian officials also pointed out that by using the highly regarded Statistics Canada instead of a private firm, the credibility of the information was strengthened.

If the state does decide to contract for a literacy assessment, the scope of services should include a charge to work with the state in helping to answer the key questions in this chapter. The state should not try to determine the detailed scope of the assessment — including sample sizes or scoring scales, for example — without expert help.

Question #6: How Will Quality Control Be Assured?

Assuring that the assessment is of high quality will be the primary job of the state agency organizing and funding the assessment. It will be important to allocate enough resources within the staff of the governor's office or in a lead agency so that oversight is adequate every step of the way. While much of the work will have to be accomplished by outside contractors, having someone with substantial expertise in assessment, survey design, sampling, and related skills available as project monitor is very important.

Although the contractors will be responsible for ensuring the quality of a survey, state officials need to be aware of issues that will arise about the interview process. Mississippi initially attempted to train community residents to administer surveys, for example, but found that their performance was not adequate. Mississippi study officials

decided, then, to hire surveying professionals. Issues that must be addressed to assure quality control include:

- Drawing and weighting the sample correctly.
- Reviewing assessment packets.
- Calling respondents to check that they had been surveyed.
- On-site quality checks.

Using a reputable survey research firm is important to the credibility of the assessment results.

In addition to these quality control issues, states should ensure that interviewers have been adequately trained and are reliable. Mississippi officials reported difficulties in both of these areas. They also recommend that the survey not be taken in the summer, if possible, because of the difficulty of reaching respondents.

Because the results of a literacy assessment will be scrutinized carefully by a variety of groups, including the legislature, it is important to entrust the implementation to an organization with at least a statewide reputation for quality work. An advisory group of representatives from agencies who will use the information or who are providing funding might also have a role in monitoring quality control efforts.

Question #7: How Will the Assessment Be Financed?

No matter what course the state takes in undertaking a literacy assessment, it will not be inexpensive. In the current fiscal climate, it will probably be difficult to secure a special appropriation for this purpose, but it may be possible to get state agencies involved with job training, adult literacy, welfare, and other literacy-related activities to contribute to the funding, either with federal or state funds. By putting together a funding coalition, literacy policymakers can also ensure

that state agencies take seriously the need for quality control and have a stake in using the information.

The cost of a state assessment will vary depending on the level of detail desired and the strategy chosen.

Possible sources of funding include state appropriations, federal Job Training Partnership Act funds, especially the 8 percent set-aside, federal adult education funds, Carl Perkins Act vocational education funds, Wagner-Peyser governor's discretionary funds (Section 7B), Even Start program funds, and federal unemployment insurance administrative funds. Using the federal funds will have to be justified in terms of the value of literacy assessment to each of the categorical purposes of the federal programs. Mississippi used Wagner-Peyser funds financed through the Employment Security Commission, for example, on the grounds that literacy assessment will assist in planning appropriate and effective job training programs. In Oregon, the Progress Board used state general funds and lottery proceeds to conduct the statewide survey.

The costs of assessment will vary depending upon the level of detail desired in the literacy assessment itself and the strategy chosen. In general, the least expensive way to assess will be to use proxies and relevant information available from national surveys, but this will also generate less information than the state may need. The total costs of a survey assessment will exceed $200,000 but should not be more than about $300,000 exclusive of staff time needed to monitor and ensure quality. Mississippi's extensive survey cost about $300,000. Oregon's assessment cost about $240,000. These costs would have been substantially more if the states had not relied upon a concurrent national assessment effort and adapted existing survey instruments and background questionnaires. Using the NALS system will be the most expensive option. This will cost states a minimum of $345,000, but ETS is allowing states to spread the cost over three years.

If the state decides to pursue a proxy or secondary data solution to its literacy assessment needs, it can conduct the study in-house, using existing analytical staff. States should allow about six months to

complete the study and allocate at least two people to the task. If states decide to contract out for a secondary or proxy data study, they should probably budget between $50,000 and $100,000.

Conducting an assessment is a difficult and complicated process. Fortunately, states now have the benefit of experience in both the national studies and the work undertaken in Mississippi and Oregon. For those who are interested in more detail on the steps involved in conducting a statewide assessment of literacy proficiencies, please see the appendix.

CHAPTER 4

OPTIONS FOR STATE LITERACY ASSESSMENT

Based on the experience of the recent past, we will outline the basic options facing states in literacy assessment, discuss pros and cons of various approaches, and explore a combination of approaches. The three basic options for literacy assessment are:

- Using the National Adult Literacy Survey system.
- Conducting a state-specific assessment.
- Using other national survey results and proxy data to estimate literacy.

USING THE NATIONAL ADULT LITERACY SURVEY SYSTEM

The Educational Testing Service offered states the opportunity to participate in the NALS by expanding the number of respondents to the survey. The state would contract with ETS to administer the measurement instruments and background questionnaires to a sample of 1,000 adults in addition to any other adults in the state who would otherwise be in the ETS sample. For participating states, this would ensure that information generated would be statistically valid for the state as a whole or for select subgroups.

States can participate in the NALS assessment for a cost of $345,000, payable over a period of three years.

For states that choose this option, the ETS will not change the instruments used for the survey to assess different skills but will permit states to add up to five questions to the background questionnaire. Because of limitations on the sample size and questionnaire design, using the NALS system will provide only greater depth of coverage among ETS established subgroups of the state population. This option will cost states $345,000, payable over a period of three years. Future use of the NALS system will probably have a similar cost, although the details of how this option will be financed have not been worked out.

Samples for the NALS will be drawn in June and July 1991. Data will be collected between February and June or July 1992. Results are expected to be available by the fall of 1993.

ETS offers considerable survey research experience to states interested in literacy assessment.

Nine states have accepted this offer and planning is well under way to include these states in the NALS survey. Since the opportunity to participate in the first round has passed, ETS plans to offer a similar opportunity for states to participate in future NALS activities. These could include a special round of surveying with several states, or states could wait until the next administration of the NALS, planned for later in the decade.

Advantages: The advantages of using the NALS system would be substantial because the assessment would be solidly grounded, the results would be comparable with national data and quality would be ensured.

States exercising this option would be assured that the survey instrument and background questionnaire are as well researched and valid as possible. Building on a wealth of experience, ETS has developed a high level of expertise in survey research in the literacy field. Westat, Inc., a highly regarded survey research firm, will work with ETS and be responsible for the sampling, staff training, and field data collection effort. States would also be able to compare results with national and other states' results. Since the same set of simulation tasks would be used in every state, the results would vary only by the extent of the sample.

Disadvantages: Disadvantages of using the NALS system relate primarily to the lack of flexibility in assessment, the timing of the survey, and the somewhat higher costs.

By using the NALS system, states would lose flexibility in adding or modifying simulation tasks to investigate literacy skills other than

those defined by the NALS protocols. If state policymakers want to examine more job-related skills or investigate writing skills, for example, they would not be able to do so solely by using the NALS system.

Using the NALS would be somewhat more expensive than a state-specific survey using modified instruments and background questionnaires from national surveys. The NALS option will cost $345,000 for a sample size of 1,000 for states that have already chosen to participate.

The state options, both of which drew heavily from the Workplace Literacy Project, cost $234,000 to $300,000 for sample sizes of 1,800 to 2,000. Some of this cost difference can be attributed to in-kind contributions from the states and some can be ascribed to the nature of the sampling frame selected. Without the help of the WLP, the costs to states would be considerably higher. For either option, finding the funds and putting together funding coalitions among state agencies will be difficult and take time. When services are being cut back, it may be difficult to explain the need for funding an assessment.

Conduct a Separate Assessment

The second option for states is to conduct their own assessments.

The second major option for states is to conduct a separate assessment, drawing upon the expertise developed in the national surveys. Mississippi and Oregon chose this option because of the flexibility in defining the assessment and sample as well as the ability to speed up results.

Advantages: Advantages include lower costs and the ability for states to modify national assessment tools, study some groups more intensively than others, and obtain results in a more timely fashion.

By implementing a separate assessment, state officials can examine

Even in separate assessments, states would probably opt to use basic instruments developed for earlier studies.

different skill areas and concentrate on some areas in more detail than the NALS allows. At the same time, cost considerations and the need to generate comparable data will probably mean that the basic instruments and background questionnaires will be derived from earlier national studies.

Although neither Oregon nor Mississippi chose to administer different instruments to various populations, it would be possible for a state to conduct a WLP-like study of particular target groups. Samples could be drawn from the population as a whole, or from program participants such as unemployed people or job training candidates. This would allow for gathering more in-depth information on the literacy skills of people who are especially important to policymakers.

If states act with dispatch, separate state studies could be completed by early 1993, substantially earlier than if they use future NALS surveys. For those who face difficult budget decisions during the next two years, having this information as early as possible would be beneficial. In addition, a separate study might well be less expensive than using the NALS system for future surveys.

If a state acted promptly, separate studies could be completed by late 1992.

Disadvantages: Disadvantages include the difficulty of financing and managing a separate assessment and the possibility that a separate study may not reveal significantly different information from national or other state studies.

The Mississippi and Oregon experiences show that conducting a separate study requires considerable staff time and outside expertise. Although study designers can benefit from the work already done on national surveys and in those states, it will still take time and resources away from other issues and programs.

One of the surprises of the Oregon and Mississippi studies was that the literacy levels measured in two very different states were not much different from each other, or from national estimates generated

through the 1985 Study of Young Adults. Mississippi's literacy levels were slightly lower, as might be expected from other indicators, and Oregon's were slightly higher than the national study reported.

State-specific studies are able to provide much more detail than national studies.

While the overall scores were not substantially different, state-specific studies were able to provide much more detail because of the larger sample sizes. A separate assessment may provide few surprises about statewide literacy levels, but it will provide much more information on the types of skills possessed at a much greater level of geographic and socioeconomic detail.

Use Secondary Data as Proxies for Literacy Assessment

The third possible alternative for states is to use the growing data available from national and state studies to develop a correlative model linking literacy levels to other information on populations, and then apply those correlations to "work back" to estimates of literacy levels. This option is increasingly attractive, primarily because it is likely to be less expensive than any of the options that generate primary data. As state fiscal difficulties make it more difficult to justify spending on information instead of programs, some states may decide to use a "proxy" approach in the near term and finance a more detailed survey when funds are available.

Many states have already used secondary data to generate statewide estimates of literacy levels as part of their strategic planning processes. Most of these estimates relied on old census data and can now be updated as the results of the 1990 census are made available. In addition, states have used program information to get rough estimates of the literacy levels among client groups such as welfare recipients, prisoners, or job training enrollees.

With the completion of the national WLP survey and the Canadian survey, as well as the Oregon and Mississippi studies, states may be able to take an additional step in using surrogate data. They can

The third alternative for states is to develop a proxy approach to literacy assessment.

determine which socioeconomic indicators correlate well with literacy levels, find out the incidence of those indicators in their own states, and estimate literacy levels. In Canada, researchers have worked with results from their national assessment to develop models using proxy data that appear to explain many of the results of the adult literacy survey. Similarly, in the Mississippi study, models were used to work back to county-level estimates.

The availability of these national results and relatively fresh census data may allow states to accomplish a great deal through the proxy method. States can also combine proxy estimates with program information to find out more about the literacy levels among specific client groups. States that use the CASAS tracking system, the TABE assessments for individual learners, or the NAEP scales in programs can also use these data to understand more about learner populations.

It may be possible to combine a short survey with proxy data to get good estimates of literacy levels either statewide or among target populations. By drawing from studies such as the Canadian study and the Oregon and Mississippi study, state officials could determine what indicators are most highly correlated with specific literacy levels. Self-assessment, the mother's education level, income and whether people are on public assistance are all highly correlated with literacy levels. These could be measured through a very short survey and then extended through the use of proxy data to a statewide assessment at relatively low cost.

While less expensive and easier to compile, proxy measures will only provide estimates that are less accurate than actual survey data.

Advantages: Advantages include the low cost of this option and the possibility of using socioeconomic data that is collected more regularly than primary data to update overall estimates.

By using the proxy method in conjunction with information from national surveys, states should be able to generate better estimates than ever before without going to the expense of commissioning a statewide survey. In addition, it may be possible to use self-assess-

ment and other techniques to strengthen secondary estimates. Researchers in Canada found, for example, that people were able to estimate their own literacy levels quite accurately.

State officials that need literacy information to target resources or to make changes in particular programs can use secondary data to determine the characteristics of target populations and particular groups of clients. This information can be combined with information derived from other literacy assessments to estimate the literacy skills of particular groups. Then this information can be "enriched" with data from program operations. For example, data from individual literacy assessments gathered through the operations of adult education or job training programs in a particular geographic area can be combined with secondary data on education levels, income, race, and other characteristics to get a good estimate of literacy levels for a target group within the overall state population.

Much of the secondary data is already collected on a regular basis. The 1990 census will provide detailed information on age, race, income, and other variables. Many of the labor market variables, such as occupational categories, are available on a state level and according to metropolitan areas. If literacy levels are estimated based in part on income, education, or other labor market variables, for example, they may be able to be used to update estimates at the state level. At the same time, it will be necessary to "recalibrate" the relationships between proxy measures and literacy skills from time to time.

Disadvantages: Disadvantages include questions about the reliability of proxy data and difficulty in ensuring accountability over time.

No matter how close the correlation between national survey data, data from other states, and proxy measures, they will always generate only *estimates* of literacy that are less accurate than a statewide sample survey. In addition, getting estimates for small geographic areas will be difficult, since the reliability of the proxy data can be

Proxy measures can give us estimates of literacy but not a way to measure progress over time.

severely limited at the sub-state level. If part of the motive for assessing literacy skills is to develop sub-state estimates, the proxy measure may not be very useful at all.

By using combined proxies such as income, race, education levels, labor force participation, and other measures to estimate literacy, it will be extremely difficult to judge whether state policies are working. This is because the causal link between literacy policy and changes in proxy measures is not strong. In an oversimplified example, if a combination of years of schooling and income data were used to estimate literacy levels, both of those indicators would have to change to show an improvement in literacy levels over time. If literacy policy worked outside the school systems and had little immediate effect on incomes — as is likely — it would be possible to improve literacy levels without those improvements showing up in the proxy data. Similarly, regional economic development could suddenly improve incomes in a sub-state region without significantly improving literacy levels in the short term.

The NALS data should give states a better idea of the appropriate proxies for literacy assessment.

In this chapter, we have examined the three basic alternatives for assessing adult literacy. These alternatives, we should stress, may not be mutually exclusive. A state might want to engage in all or part of the activities involved in the alternatives. For example, a state with a strong commitment to assessment might want to do its own survey of target populations in the near term, use future NALS surveys to get adult population-wide data in the mid-term, commit to a state population-wide survey every five years for accountability, and use proxy measures in the interim years. When data from the initial round of NALS states becomes available, states will also have a better idea of the strength of the correlates between direct testing and proxy variables.

CHAPTER 5

USING ASSESSMENT RESULTS

As states get more serious about literacy, they are finding that a comprehensive strategy will be needed. Volunteers and literacy foundations are not enough. Data from statewide literacy assessments will provide information to help shape literacy policy for the next ten years. Following are some of the benefits and uses of assessment results.

WHEN STATES KNOW THE SKILLS OF ADULTS ALONG THE LITERACY CONTINUUM, THEY WILL BE ABLE TO MAKE BETTER STRATEGIC DECISIONS

Results from Mississippi and Oregon confirm the basic picture of literacy that has been developing in recent years. Most adults possess basic skills, but a large percentage cannot accomplish more complex tasks. Oregon's adults in the aggregate score higher than Mississippi adults, but the majority in both states have basic literacy skills. In the area of quantitative literacy, for example, 96 percent of Oregon adults could total two entries on a deposit slip, while about 70 percent of Mississippi adults could accomplish the same tasks. About 37 percent of Oregon adults could correctly determine correct change using a menu, while about 20 percent of Mississippi adults could do the same task. Among younger respondents, the differences between Oregon and Mississippi were smaller than among all adults.

Literacy assessment results will enable states to make better strategic decisions.

Larger percentages in Mississippi than in Oregon have very low skills in all three areas of literacy. This implies that Mississippi requires a different strategy for addressing literacy needs than Oregon. Both states now have the capacity to focus those strategies to address where their adults' skills lie on the literacy continuum. This is an important advantage in building literacy strategies.

Based on this new picture of literacy, state policymakers will be able to advocate a broader mix of programs and incentives in statewide literacy strategies. Once state literacy assessments enable policymakers to show that the real problem is the skills gap, states will focus more resources on strategies involving workplace literacy and family literacy programs. These strategies, in turn, can support other objectives, such as economic development, welfare reform, crime reduction, and educational improvement.

Literacy assessments can help states focus on where adults lie on the literacy continuum.

Breakdowns by socioeconomic categories will allow better targeting of resources

State literacy assessments will enable state officials to know the literacy skills of people not only by age but also by income, race and occupation. This will allow political leaders and policymakers to tie literacy policy more firmly to other goals, such as economic development and education reform. Policymakers who have decided to focus attention on the literacy of the labor force, for example, will now know the literacy skill levels of adults in various occupations and with different incomes. Strategies for reaching these workers can then be developed to target programs in certain occupations or among people with low incomes, for example. In addition, policymakers can decide whether existing programs, such as job training or the employment service, can reach significant percentages of the labor force with low skill levels, or whether other approaches are needed. By having the numbers, both strategic and tactical decisions will be easier.

Socioeconomic breakdowns in assessment data will aid in targeting programs.

Other targeting decisions will also be made more easily. If reduction in welfare dependency is a major state goal, literacy efforts can be targeted to welfare recipients with a much better knowledge of their skills. Since NALS will include a sample of the incarcerated population, states will also know more about the skill levels and characteristics of inmate populations.

ASSESSMENT DATA WILL HELP PROGRAM DESIGNERS DEVELOP BETTER APPROACHES AND PROGRAM MANAGERS DELIVERY MORE "CUSTOMER-ORIENTED" SERVICES

Better data will allow program developers to design programs tailored to the average skills of sub-groups of the population. In Mississippi, for example, skill levels were found to be highly correlated with income, race, and the respondent's parents' level of education. This implies that literacy programs serving areas with large numbers of low-income minority adults should focus on basic skills, and suggests that family literacy programs may be crucial to help the next generation as well. While it is not surprising that skill levels are lower in low-income communities, it is helpful for policymakers to know how low those skills are so that programs can be designed that start from the right point and use techniques that are successful with low-income minority people.

Assessment data will help program designers develop better approaches to literacy instruction.

The Oregon assessment enables policymakers to know the average skill levels of people in various social services programs. Adults receiving any social service tended to score lower than other adults. AFDC recipients scored lower than food stamp recipients who did not receive AFDC, but higher than recipients of general assistance or home relief. This information will be useful in designing programs to reduce dependency among social services recipients.

The results of the Canadian survey drew much attention to people who scored at Level 3 — people considered to be "at risk" for job retraining. While these people do not consider themselves "illiterate" by any means, they generally do not read at home or work and may need substantial help to compete in the future job market. Planners in Canada are concerned over the large numbers in this category and have begun to consider new strategies to help them.

Literacy professionals have long known that programs are more effective if they are tailored to the needs and characteristics of clients.

Assessment data will help states move away from "one size fits all" program design.

Because motivation is so important to adult learning, programs that are responsive to the characteristics of learners have a much better chance of success. As a result, states are moving away from "one size fits all" program designs. With more detailed survey data and information on the background of potential clients, states will be able to design more effective programs tailored to the needs of learners.

GEOGRAPHIC BREAKDOWNS WILL ENABLE POLICY AND PROGRAM PEOPLE TO DEVELOP THE RIGHT "MIX" OF PROGRAMS AND POLICIES FOR SUB-STATE AREAS

Sub-state data will enable policymakers to develop the right mix of programs and policies across the state.

Understanding and responding to the differing political, economic, and programmatic needs of sub-state areas can be the difference between a successful policy initiative and a failure. Sub-state regions have their own customs, cultures, and political histories and can have populations of very different levels of income and outlook. Knowing skill levels by sub-state geographic areas can be a crucial part of designing a literacy strategy that will work in communities and neighborhoods as well as it works on the drawing board.

In Mississippi, literacy assessment information was combined with proxy data to estimate prose, document, and quantitative scores by county. This will be extremely useful information for program designers as they attempt to start new programs and adjust the focus of existing literacy programs in communities across the state. It will also be powerful information when it comes time to approach the legislature for resources, and local officials for cooperation.

LITERACY ASSESSMENT INFORMATION CAN BE USED TO SUPPORT THE LINKAGE BETWEEN LITERACY AND OTHER IMPORTANT STATE POLICY OBJECTIVES

Literacy advocates have long asserted that improved adult literacy is crucial to economic development, education reform, the reduction of welfare dependency, and other important statewide objectives. Lit-

eracy assessment data can be used to strengthen the case for supporting literacy improvement as a key component of other policies and program initiatives. Literacy assessment data that shows the strong correlation between literacy and parental education, for example, strengthens the case for family literacy programs as part of education reform initiatives. Knowing literacy levels by income and occupation enables literacy advocates to argue that economic development will require higher levels of skills.

The results of literacy assessments can be used to further other important state policy goals and objectives.

Learning more about the skill gaps among workers will highlight the urgency of providing job training and other programs to upgrade the skills of the labor force, while at the same time helping policymakers to direct resources more effectively. Literacy advocates have long claimed that basic literacy skills training and higher level training are both necessary to close these skill gaps.

Until recently, these claims have been rhetorical or based primarily on scanty national data. Now, literacy advocates in places such as Oregon and Mississippi can show the connection right in the communities where legislators and political leaders live. They can also show agency administrators the relationship between improving literacy skills and improving the lives of their clients. Literacy assessments will give literacy advocates the ammunition they need to make the case to the larger public for resources and long-term commitments to literacy improvement.

Literacy assessments can help literacy advocates make the case for increased resources.

The first primer suggested that state literacy strategies must be linked closely to other goals, such as economic development or education reform. More and better data from state literacy assessments will enable state officials to develop strategies that relate directly to those goals. If the preparation of young children for school is a major goal, for example, a detailed assessment will tell us where low-skilled mothers with small children are, and will help us design programs to serve them and their children. In this way, we can make more tangible our assertions that literacy services support major state and national objectives.

LITERACY ASSESSMENT WILL ENABLE THE PUBLIC, PRESS, POLITICAL LEADERS AND OTHERS TO SEE IF LITERACY POLICIES ARE WORKING

Literacy assessment will help us see if programs are working.

Perhaps the most important benefit of assessment data will be gaining the ability to demonstrate progress over time. Increasingly, political leaders, the press, and the public are demanding to know whether or not state policies are having a real effect on people's lives. For the first time, state officials will be able to track progress in improving literacy not only statewide but according to income levels, race, age, sex, and residence. To gain this unique ability will require a long-term commitment to assessment, but it is a commitment that will be well worth making. States are developing accountability systems, similar to Oregon's, that not only will set goals for the future, but also will measure progress toward those goals.

By performing literacy assessments at regular intervals, state officials can have better information about whether or not policies and programs are working. This feedback can be used to adjust and improve programs on a timely basis.

Feedback on how well programs are working can be used to adjust and improve programs.

Even if policies are not working, or if external conditions change, policymakers will know it and be able to change things before the political leadership and the public become disenchanted with the goal of a more literate population itself. If policies are working, political leaders can justifiably take credit and the competition for scarce resources will be won more easily in the legislative and political arenas.

APPENDIX

STEPS IN CONDUCTING A LITERACY ASSESSMENT

This information is presented to give persons considering conducting their own assessment an indication of the range of responsibilities involved. The format and all information on Mississippi is the product of Maxie Kohler, Ph.D., School of Education, Room 107, University of Alabama at Birmingham. Information on Oregon comes from Tim Houchen of the Oregon Progress Board.

STEP 1— SAMPLE SELECTION AND DESIGN: Building on the sample design and selection procedures of the DOL Workforce Literacy Project, Mississippi designed the specific procedures to be used in their survey. They used research staff of the Social Science Research Center of Mississippi State University (MSU). Oregon worked with the Survey Research Center at Oregon State University to design the sampling scheme, and contracted with an outside firm to select the sample.

STEP 2 — SELECTION AND TRAINING OF INTERVIEWERS: Mississippi officials first used non-professional interviewers. To select interviewers they developed criteria for selection (B.S. in education, social sciences, etc., knowledge of the local community, and good communication skills) and issued letters of invitation and applications to social workers, school counselors, truant officers, etc. Non-professional interviewers were trained at a two-day training session. Participants were provided with an individualized training manual designed for non-professional interviewers.

Due to poor performance of non-professional interviewers, Mississippi shifted to professional interviewers. Officials obtained a proprietary list of professional interviewers and began recruitment. Professional interviewers were trained. New interviewers were continually brought on, so training was an on-going process.

Oregon contracted with an outside firm to conduct the interviews. Award of the contract was based significantly on the firm's demonstrated experience conducting household surveys statewide and its statewide network of experienced interviewers.

STEP 3— DATA COLLECTION: In Mississippi, interviewers were responsible for the following:

1. Presenting the assessment in a positive light so as to gain cooperation of the sought-after respondent.

2. Making sure that "bundles" of packets remained "spiraled," as required by ETS.

3. Conducting interviews according to protocol established by MSU and ETS, complete with utilizing almanac and newspaper for questions, where appropriate.

4. Making sure that all identifying information was placed on all appropriate forms and instruments prior to transmittal to MSU. This information included the respondent number, the cluster number, the household number, the interviewer ID number, the interviewer name, and the time the interview began.

5. Making sure that all observations and other unusual characteristics of the respondent and/or setting were noted and legible in the Interview Guide.

6. Mailing each completed packet to MSU using a pre-stamped envelope provided by MSU and ensuring that each envelope contained only one completed assessment.

MSU created a Central Data Collection Team, which was responsible for the following:

1. Training all interviewers in appropriate methods of assessment and protocol.

2. Tracking daily progress of professional interviewers so as to adhere to the prescribed data collection schedule.

3. Providing all materials to interviewers in the field.

4. Providing access for interviewers and respondents to reach the Central Data Collection Team at any time, including toll-free numbers, etc.

5. Providing all identifying and enhancing information to aid interviewers in gaining access to appropriate respondents (e.g., identification badges for interviewers, descriptive pamphlets of the study, letter of request for participation from the Governor).

6. Paying interviewers for data collection.

7. Paying respondents for participation.

8. Retrieving all unused materials from interviewers.

9. Being on call at all hours of the day and night to aid in solving problems.

10. Receiving all assessment packets from interviewers.

11. Performing quality control for the assessment project.

Oregon's data collection effort was similar to Mississippi's except that Oregon's outside contractor modified the protocol developed by ETS for the Workplace Literacy Project survey and completed interview booklets were mailed from the field to the contractor weekly. The contractor performed the same tasks listed for the Mississippi State University Central Data Collection Team.

STEP 4— QUALITY CONTROL: In Mississippi, quality control procedures were implemented as follows:

Level 1 - Comprehensive Review of Assessment Packets. Each assessment package was reviewed for problems upon receipt. Examples of problems found were failure to complete all identifying information, failure to adequately record observations, and similarity of writing in numerous assessment instruments. To solve these problems, packets were forwarded to the Central Data Collection Team Manager for review. Typical solutions involved calling interviewers back for complete information, sending packets back to be completed and made more legible, and implementing specific telephone quality control for those respondents whose packets appeared similar.

Level 2 - Telephone Quality Control. Telephone quality control consisted of calling individual respondents to make sure they were, in fact, interviewed as stated by the interviewers. Individual respondents were carried through a series of routine questions. This was performed for approximately 8 percent of the sample. These questions included family placement of residence, age, sex, address, and various other general questions, including the length of the interview session. Because of information found in performing Level 1 quality control, this initial level of telephone quality control was found to be incomplete. Consequently, telephone quality control measures were expanded to include questions regarding whether or not the respondent was required to answer reading, arithmetic, and various other types of performance-related questions.

Level 3 - On-Site Quality Control. At this level, two types of on-site quality control were performed.

Type A: On a select few of the many overall clusters throughout Mississippi, actual on-site visitation by the data collection director was made. In some instances, it was found that interviewers did not adhere strictly to the sample design. This was reported to the sampling professional.

Type B: Because it was found initially in Mississippi's review of assessment packets that numerous packets from two particular interviewers appeared strangely similar, telephone quality control was then performed. Upon implementing telephone quality control they found that assessment data from those interviewers were falsified. On-site quality control was performed on a select few of these cases. Upon talking to the "respondents" and showing them assessment packets that were purported to have been completed by them, handwriting verification forms and release information forms were collected in the event they were needed by the university. The data-set was rid of the falsified cases and an alternate method of recollecting the data was implemented. All release of information forms and handwriting verification forms were forwarded to university officials for legal disposition.

Oregon's contractor's quality control steps included:

- In-house supervision and administration of the project with experienced personnel.

- Extensive screening, training, and monitoring of interviewers.

- Verification of the key address for each cluster of interviews.

- Verification that the rigid sampling and respondent selection procedures were followed.

- Strict call-back procedures designed to ensure that respondents were contacted on different days and at different times of the day.

- Use of a Participant Reply Card to evaluate the interviewer and confirm the date, time, and length of interviews.

- Timely editing of survey instruments by the contractor to ensure that core items had been correctly scored and that the assessment was complete.

• Verification of 50 percent of completed instruments to ensure accuracy and compliance with sampling techniques.

STEP 5— COMPUTATION OF HOUSEHOLD DISPOSITIONS: Although 600 clusters were purchased for use in the Mississippi sample, only 588 were actually used, bringing the total of actual possibly eligible households to 3,528. (Twelve clusters remained unused.) Among these households, 1,803 interviews were completed. Seventeen interviews were terminated, and there were 189 refusals. Other dispositions included: 146 respondents unavailable, 305 respondents could not be located, 208 were of ineligible age, 404 were of ineligible sex, 45 were of ineligible health, and 121 were from disqualified businesses.

In oregon, 1,000 clusters were purchased but only 637 were used, bringing the total of actual possibly eligible households to 4,459. Among these households, 2,000 interviews were completed. Twenty-two interviews were terminated, and there were 738 refusals. Other dispositions included: 580 — no answer; 191 — respondent not available; 198 — vacant or vacation homes; and 730 — ineligible age.

STEP 6 — WEIGHTING OF SAMPLE: In Mississippi, weighting of the sample was done by MSU. Sample weighting for Oregon was performed by the Survey Research Center at Oregon State University.

STEP 7 — DATA ANALYSIS: This step was performed by ETS for both Mississippi and Oregon.

STEP 8 — REPORT WRITING AND DISSEMINATION: In both Mississippi and Oregon, the report writing and dissemination functions were kept within state government. The Oregon Progress Board was responsible in Oregon for both report writing and dissemination. The Social Science Research Center in Mississippi wrote the report, with the exception that the executive summary was written by the Office of Literacy. Dissemination is being handled by MSU and the Office of Literacy.

ENDNOTES

1. National Educational Goals Panel, *Measuring Progress* (Washington, D.C.: National Educational Goals Panel, 1991), p. 24.

2. National Educational Goals Panel, *Measuring Progress* (Washington, D.C.: National Educational Goals Panel, 1991), p. 26.

3. Oregon Progress Board, *The Oregon Literacy Survey* (Salem, Ore: Oregon Progress Board, May 1991).

4. Robert Silvanik, *Toward Integrated Adult Learning Systems: The Status of State Literacy Efforts* (Washington, D.C.: National Governors' Association, 1991), p. 11.

5. Statistics Canada, *Survey of Literacy Skills Used in Daily Activities* (Ottawa, Ontario: Statistics Canada, 1990).

6. Educational Testing Service, *National Adult Literacy Survey* (Princeton, N.J.: Educational Testing Service, 1990).

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